



Plenary 5

Post-translational Glycosylation and Carbohydrate-mediated Biological Recognition

Chi-Huey Wong

Academia Sinica, Taipei, Taiwan

Protein glycosylation is the most complex post-translational process; more than 90 percent of human proteins are glycosylated. The significance of glycosylation at the molecular level is however not well understood, and as such the pace for the development of carbohydrate-based drug discovery and diagnosis is relatively slow. It is thus important to develop new tools to study the effect of glycosylation on the structure and function of proteins and other biologically active molecules. This lecture will focus on the development of new methods for the synthesis of homogenous glycoproteins with well defined glycan structure, glycoarrays for the high-throughput analysis of protein-glycan interaction and design of click-induced fluorescent probes for use to identify new cancer biomarkers for diagnosis and drug discovery. New glycoprotein vaccines have been designed and developed to tackle the problems of flu and breast cancer.